## CLAIMS

1. A method for the generation of antigen presenting cells comprising:

a) collecting said cells from a subject,

b) activating said collected cells;

c) culturing and optionally expanding ex vivo said activated cells;

d) treating said cultured and optionally expanded cells with DNA hypomethylating agents so that said cells concomitantly express multiple tumor associated antigens.

2. A method according to claim 1, wherein said subject is a mammal.

3. A method according to claim 2, wherein said subject is a human.

4. A method according to claim 2, wherein said subject is a cancer patient.

5. A method according to any of claims 1-4, wherein said cells are immune cells.

6. A method according to any of claims 1-4, wherein said cells are non-immune cells.

7. A method according to any of claims 1-6, wherein said cells express shared immunodominant cancer antigens.

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8. A method according to any of claims 1-6, wherein said cells express shared not immunodominant cancer antigens.

9. A method according to any of claims 1-5 and any of claims 7-8, wherein said cells are Epstein-Barr virus-immortalized B-lymphoblastoid cell lines.

10. A method according to any of claims 1-5 and any of claims 7-8, wherein said cells are Pokeweed mitogen (PWM)-activated B-lymphocytes.

11. A method according to any of claims 1-5 and any of claims 7-8, wherein said cells are CD40 activated B-lymphocytes.

12. A method according to any of claims 1-5 and any of claims 7-8, wherein said cells are Phytohemagglutinin (PHA) + recombinant human interleukin-2 (rhIL-2)-activated PBMC.

13. A method according to any of claims 1-5 and any of claims 7-8, wherein said cells are Phytohemagglutinin (PHA) + recombinant human interleukin-2 (rhIL-2) + pokeweed mitogen (PWM)-activated PBMC.

14. A method according to any of claims 1-4 and any of claims 6-8, wherein said cells are dendritic cells, monocytes, macrophages.

15. A method according to any of claims 1-4 and any of claims 6-8, wherein said cells are CD34+ cells, fibroblasts, stem cells, fibroblasts and cheratinocytes.

16. A method according to any of claims 1-15, wherein histone deacetylase inhibitors are used in step d).

17. A method according to any of claims 1-16, wherein said DNA hypomethylating agent is selected from 5-aza-cytidine or 5-aza-2'-deoxycytidine.

18. Cells obtainable by the method according to any one of claims 1-17.

19. Use of cells of claim 18, and/or their cellular components for prevention and treatment of malignancies of different histotype that constitutively express one or more of cancer antigens.

20. Use according to claim 19, wherein said shared cancer antigens are immunodominant cancer antigens.

21. Use according to claim 18, wherein said shared cancer antigens are not immunodominant.

22. Use according to claim 18, wherein said cancer antigens are Cancer Testis Antigens.

23. Use according to any of claims 19-22, wherein said cells are stored as reservoir of pooled antigens.

24. Pooled antigens as referred in claim 23 for use as cancer vaccine.

25. Cancer vaccine comprising cells of claim 18.

26. Vaccine according to claim 25, said vaccine being autologous.

27. Vaccine according to claim 25, said vaccine being allogeneic.

28. Vaccine according to claim 27, wherein the cells are used as according to claim 23.

29. Vaccine according to claim 27 or 28, wherein cellular components according to claim 19 are used.

30. Use of cells of claim 18 and/or their cellular components in a method for generating effector immune cells, said effector immune cells being used for the preparation of a product useful in adoptive immunotherapy.

31. An article of manufacture comprising a vaccine according to any of claims 25-29 and a pharmaceutical composition suitable for systemic administration of a hypomethylating agent.